ABSTRACT

BACKGROUND

India has one of the highest tuberculosis (TB) burdens globally, accounting for 20% of the new 8.6 million TB cases annually. The burden of childhood TB in India is not clear, due to lack of ideal diagnostic methods. The annual risk of tuberculosis in children is around 2-5%. Drug-resistant (DR)strains of Mycobacterium tuberculosis are also highly prevalent among young children. The death rate among children due to tuberculosis is nearly 8-20%.

AIM AND OBJECTIVES:

The primary aim of this study is to compare CBNAAT with the conventional methods (ZN, Kinyoun, LJ culture, CBNAAT) in the diagnosis of Paediatric Tuberculosis.

MATERIALS AND METHODS

METHODOLOGY:

Ethical clearance obtained from our institution.This is a cross sectional study over a period of 17 months. A total of 115 samples (pulmonary and extra pulmonary samples- Gastric washings, Pleural fluid, Ascitic fluid, BAL fluid, Lymph node aspirate from suspected children are collected in sterile falcon tubes. A part of the sample is used for Ziehl Neelson, kinyoun acid fast staining, auramine fluorescent staining and LJ culture after proper decontamination

techniques using petroff's method. Another part of the sample is used for CBNAAT. The sensitivity of each investigation in the detection of Peadiatric tuberculosis will be determined and the data will be subjected for statistical analysis.

RESULTS:

- A total of n=115 children were included in the study. The overall detection rate of tuberculosis among the study population was 4.3%. The rifampicin resistance rate detected among them was 0.9%.
- The detection rates of paediatric tuberculosis using the conventional methods like acid fast staining, Fluorescent staining and LJ culture were 0.9%, 1.7% and 2.6% respectively. The detection rate using CBNAAT was increased to 4.34%. Thus, CBNAAT detected more positives (5/115) than other conventional methods.

CONCLUSION

Among the methods which were used for the diagnosis of paediatric tuberculosis, CBNAAT was advantageous as it could detect more cases which are missed by other conventional methods.